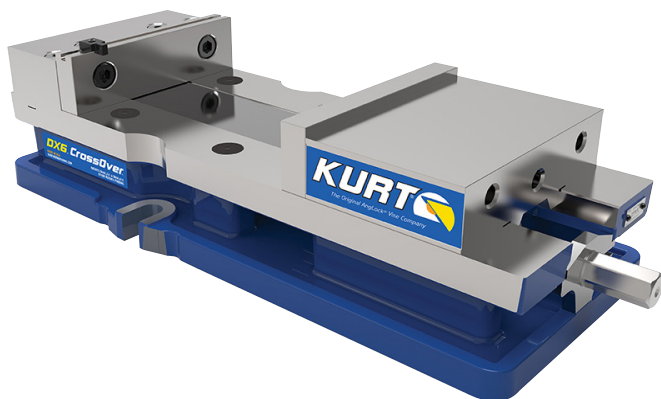




# DX4<sup>®</sup> AngLock<sup>®</sup> Vise Base Assembly

Operating Instructions Manual



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**CAUTION:**

Is used when your action or lack of action may cause serious injury.

## Vise Data

Use this to fill out information about your vise for quick reference.

Purchase Date: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Purchase Order: \_\_\_\_\_

Purchased From: \_\_\_\_\_

Delivery Date: \_\_\_\_\_

Serial No.: \_\_\_\_\_

**Note:**

Make sure to register your warranty online at [kurtworkholding.com](http://kurtworkholding.com)



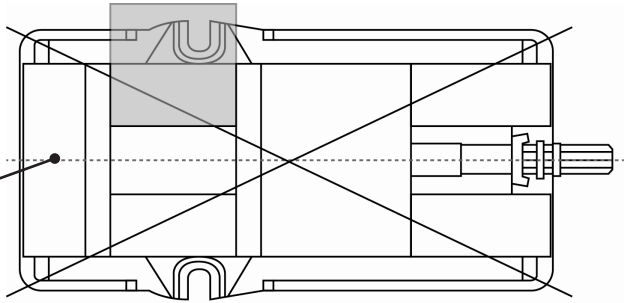




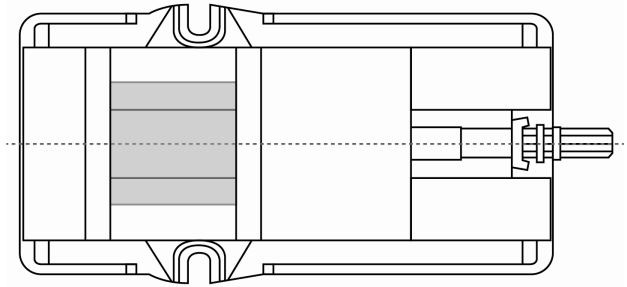
Fig.1

**Sketch #1A**  
Incorrect part  
clamping

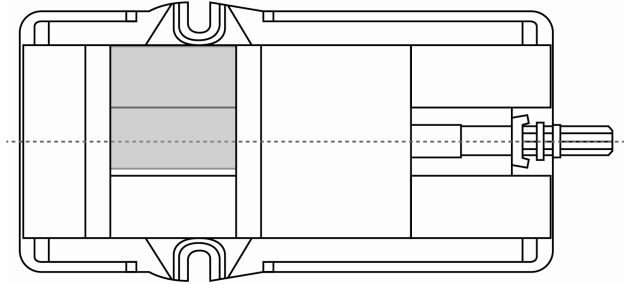
Vise width  
centerline



**Sketch #1B**  
Correct part  
clamping

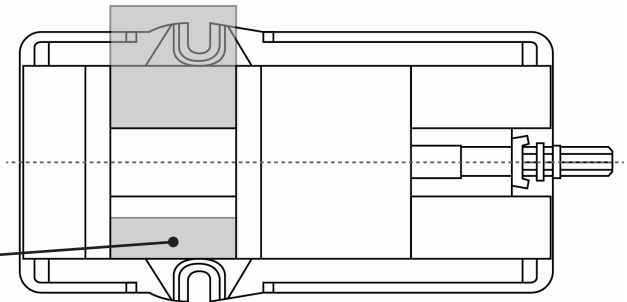


**Sketch #1C**  
Correct part  
clamping



**Sketch #1D**  
Correct part  
clamping

Non-machined  
spacer



## Surface Mount Using Sine Keys

Mounting the new DX4 with keys requires the uses of sine keys instead of standard hex keys. They are avaialbe in several different sizes ranging from .4995 x .5620 to .8745 x 09995. We also have them in metric as well. The keys are sold seprately and in sets of 2 per package.

## Proper Chip Guard installation and usage



### CAUTION:

Chip Guard stock shown above is provided to keep chips from the nut and screw assembly and *must be cut and deburred* to meet your application and safety needs.

\*This Chip Guard stock should be cut off to fill the opening between jaw plates.

**Example:** Part plus 1 1/2 inches = Length of Chip Guard stock.

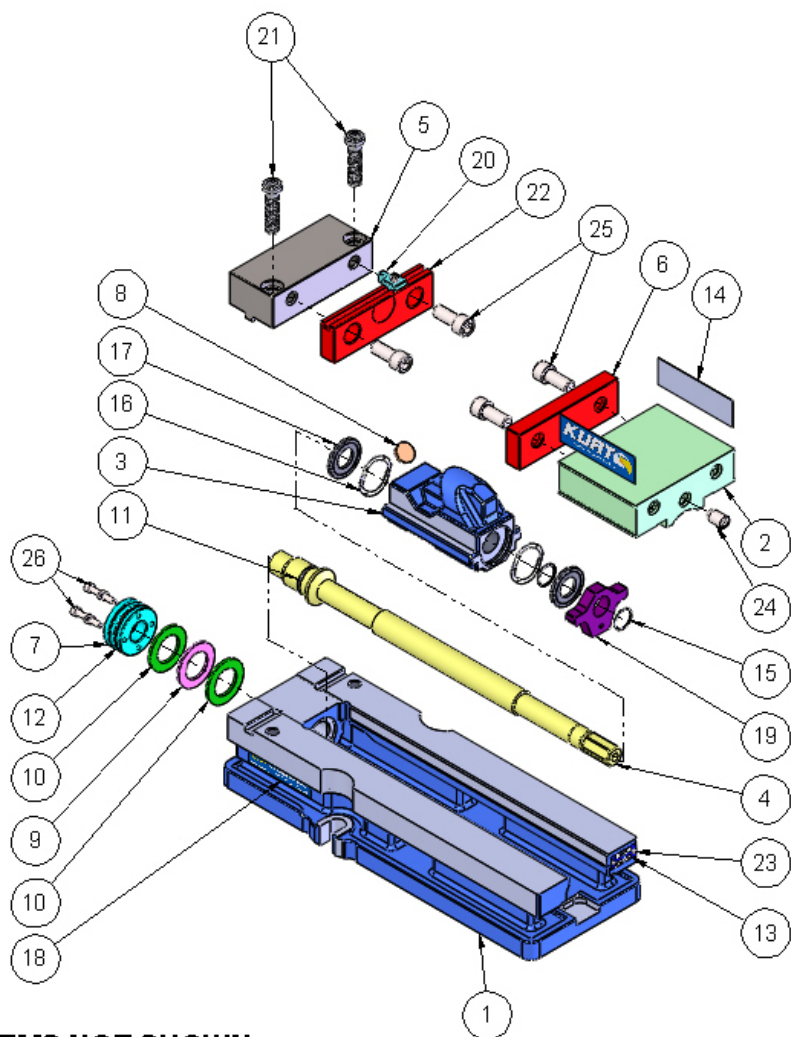
**Note:** Remove Chip Guard stock to lift vise. Corners of Chip Guard stock if left extended as shown above could cause injury.

# DX4 Parts List

ITEM#	PART #	DESCRIPTION	QTY.
1	DX4-1	Body	1
2	DL430-2	Movable	1
3	DX4-3	Nut	1
4	3400V-5A	Screw	1
5	DX4-6	Stationary	1
6	D40-7	Jaw Plate	1
7	3400V-8	Two-Piece Retaining Nut	1
8	D40-9	Segment	1
9	3400V-41	Thrust Bearing	1
10	3400V-42	Thrust Washer	2
11	3600AA-68	O-Ring #115	1
12	HDHLM4-96	O-Ring #125	1
13	DX4-102	Model/Serial Tag	1
14	DX4-111	Kurt Logo Tag	2
15	3400V-147	Spiral Retaining Ring	2
16	DX4-169	Wave Spring	2
17	PT400-211	Internal Brush Seal	2
18	DX4-223	Model Tag	1
19	3400V-224	Screw Support	1
20	WSRL46	Work Stop	1
21	00-3359	LHSHCS 3/8-16 X 1.50 LG	2
22	D40-315	Grooved Jaw Plate	1
23	07-0230	Drive Screw #2 X .25 LG	2
24	3400V-11	SHSS 3/8-16 X .625 LG	1
25	00-1353	SHCS 3/8-16 X .875 LG	4
26	00-1191	SHCS 8-32 X .375LG	4
27	D40I-10-SA	Handle Assembly	1
28	DL400-249	Chip Guard	1



# DX4 Mechanical Drawing



## ITEMS NOT SHOWN

- (27)
- (28)

# Maintenance Schedule

It is very important to perform regular maintenance on your Kurt vise to ensure proper operation. Improper maintenance will result in poor vise performance and will void the warranty.

## Daily/ Weekly

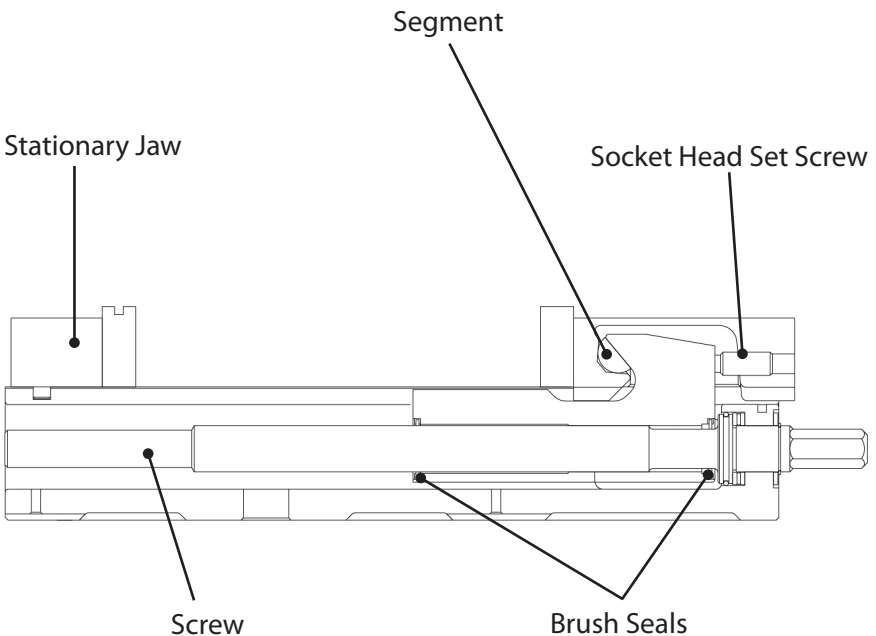
1. Remove chips from surface of vise.
2. Visually inspect seals for damage and cleanliness.
3. Visually inspect for chip entrapments and remove them.
4. Air-dry and apply rust inhibiting oil to the machined surface of the vise.

## Monthly

1. Open the vise to the maximum opening.
2. In the back of the movable jaw, (handle end, center hole) loosen the socket head set screw. (approx. 6 turns) With the hex key (Allen wrench) in the set-screw socket, lift up and forward to pivot the movable jaw off of the vise bed.
3. Slide the movable jaw slightly toward the stationary jaw and lift up to remove the jaw from the "hook" of the nut. Note: The spherical segment (looks like ½ of a steel ball) is inside the cavity of the movable jaw and may fall out as the jaw is removed. Take care not to lose or misplace the spherical segment.
4. Turn the movable jaw over and clean the inside cavity as well as the spherical segment.
5. Remove chips, clean, and apply a light coat of machine oil to the machined surface of the following items:
  - a. Nut & screw assembly (clean exposed threads on the screw)
  - b. Bed of vise (top of "rails")
  - c. Inside of the vise between the center ways.
6. To re-assemble the movable jaw, fill the segment pocket on the underside of the jaw with grease. Place the spherical segment in the pocket and push it into the grease. The grease will hold the segment in place when the jaw is turned over.
7. Tip the jaw so the front (the side with the jaw plate) is on the vise bed. Lower the jaw onto the bed so that the segment contacts the hook part of the nut and the rear of the movable jaw onto the vise bed.

8. Tighten the set screw to firmly contact the nut. Back off the setscrew 1/4-1/8 turn (approx.) DO NOT leave the set screw tightened firmly to the nut as this may cause improper operation. The movable jaw is designed to move slightly (pivot side to side) so maximum jaw plate contact is maintained when clamping out-of-parallel, sawed, or cast parts.
9. The vise is now ready for use. Open and close the vise to check for proper operation.

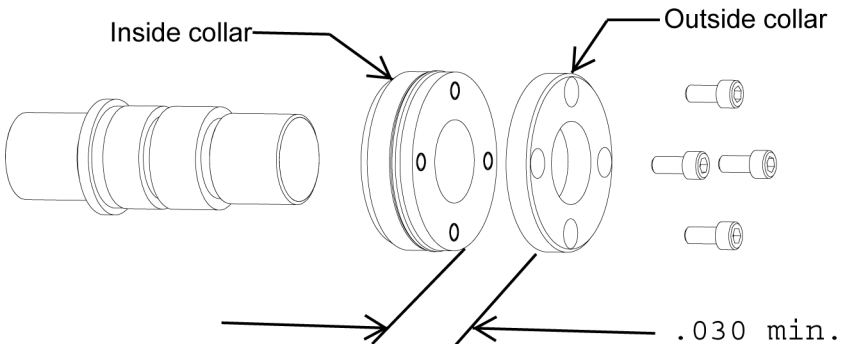
Fig.2



### 3 to 6 months

1. Open vise to maximum opening.
2. Loosen the set screw and remove the movable jaw.
3. Remove spiral retaining ring from handle end of vise screw.
4. Remove the screw support from the vise body.
5. Remove the two-piece retaining nut by removing the four SHCS.
6. With one screw still halfway out, spin off the first collar.
7. Using a pin or screw, reach into the second collar and spin it off exposing the bearings.
8. Remove the thrust bearing assembly consisting of (2) thrust washers and (1) thrust bearing from the counter bore in the end of the body.
9. Clean and inspect the counter bore, thrust washers and thrust bearing.
10. Apply water resistant grease to the thrust washer (i.e. marine grade grease)
11. Install thrust bearing assembly on the screw in the reverse manner.
12. Install the first collar by spinning on the screw until it stops.  
*(Items 7 — See Fig. 3)*
13. Install the second collar behind the first and spin on until it stops.  
At this point the screw holes may or may not be lined up.
14. Turn the second collar counterclockwise until a hole lines up.
15. Then turn the collar back TWO (2) more screw holes. This will allow proper distance for the collar to lock on the threads and keep the bearings firmly in place. *(Items 15-16 — See Fig. 4)*
16. Install the four SHCS and make tight.
17. Install the screw support in the body on the screw (Hex end).
18. Your vise is now ready to use.

Fig.3



## Troubleshooting

If properly maintained, the Kurt DX6 vise will operate trouble-free for many years. In some cases, it will be necessary to troubleshoot. Use the information below to help in the process.

**Problem:** The vise is difficult to turn.

-If it is a new vise, the brush seals could be stiff. Allow for break in of vise.

-If it is a used vise, it could be filled with chips, and the threads could be jammed. Properly clean and grease the vise.

-The set screw on the movable jaw could be too tight. Loosen it 1/4-1/8 of a turn.

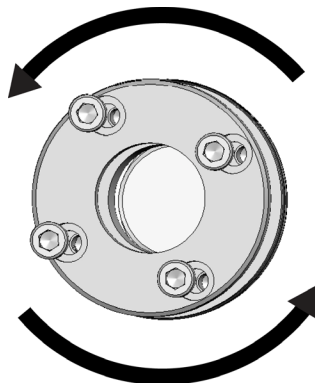
**Problem:** The vise will not turn in either direction.

-The vise is probably jammed with debris. Check both nut & screw assembly and center ways of vise body for chips and debris. Disassemble and clean as needed.

**Problem:** The vise won't hold tolerance.

-There may be jaw lift from clamping too high or on one side of the jaw. Lower the part in the vise jaw and clamp the part closer to the center of the jaws.

Fig.4







**Thank you for your purchase!  
If you have any feedback or questions.**

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or  
1-877-226-7823**

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